Abstract

The invention relates to monodispersable, optionally magnetic particles containing one or more metals, optionally, protected by a secondary treatment with air, having an adjustable average particle size of between 2 and 15 nm and a narrow distribution of particle size with a standard variance of 1.6 nm at the most. The invention also relates to a method for the production of said materials. Said materials are used in an isolated form or dispersed in a solution inter alia as a sealing medium against dust and gas in magnetic fluid sealing systems (liquid O-ring) for the lubrication and bearing of rotating shafts (magnetic levitation bearings), for the magneto-optical storage of information and additionally, for the magnetic marking of cells and the separation thereof in biological samples or for the local application of medicaments.